



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

SOME HINTS ON ETCHING.

THE instructions given to the student of etching in former numbers of THE ART AMATEUR (see particularly the issue of September, 1881), being elementary, have left much to be said about such matters as rebiting, re-etching, revarnishing, hammering-up, alterations, and corrections. No more favorable opportunity could be afforded for the resumption of the subject than the publication by Winsor & Newton of the treatise on "The Art of Etching," by Mr. H. R. Robertson of the (London) Society of Painter Etchers. In reviewing this excellent little manual—which we may say at once contains about all that can be learned by the student save what he must acquire by actual experience—we shall quote such passages as may serve as a practical commentary on the points already covered in our observations or as may serve to complete the technical information we have endeavored to convey.

Our author pleases us at the outset by his liberal views as to the application of his art. He sees no reason for restricting its range, as some writers are inclined to do, to such subjects only as can be rapidly and decisively sketched. The present stimulus to the art has come to us in America, as it has to our transatlantic cousins, from France, where painter-etchers generally adopt a rapid and sketchy manner. But Mr. Robertson, himself a painter-etcher, admits that the fact that etching is peculiarly suited for the free expression of artistic thought does not prevent the fact being equally true that it is perfectly adapted to such elaborate work as can only be done slowly.

Among several useful recipes given in this manual is the following simple one for an etching ground: asphaltum, three parts; Burgundy pitch, two parts, and white wax one and a half parts. A pot of glazed earthenware is to be used over a slow fire. The asphaltum must be powdered and melted first, and the other ingredients being added as soon as it is in a state of fusion, are thoroughly mixed with it by being stirred with a

vent its burning while on the fire by using a slow degree of heat. In winter rather more wax should be used, so as to make the ground somewhat softer.

bath is composed of two parts of chlorate of potash, ten of hydrochloric acid, and eighty-eight of water. The water is warmed and the chlorate of potash perfectly dissolved in it first; then the acid is added.

If this bath is used, a quarter of an hour is required for the most delicate lines, and about six hours for the deepest; but most etchers who use Mr. Seymour Haden's mordant find it too slow, and modify it to suit themselves by the addition of more acid. Dr. Evershed adds also a small quantity of sal ammoniac, or sometimes common salt. Mr. Robertson says that at one time he used Mr. Seymour Haden's mordant regularly, and to render its action very uniform he kept it always at about the temperature of 70° Fahr. by means of the iron plate with gas jets beneath. His reason for preferring a quicker mordant is that, by constant watching, one can see how the acid is working, and proceed to stop-out accordingly. He says truly that there are so many causes which may render the time test inadequate, that this is really of more importance than may at first appear. For instance, the acid works more rapidly in hot weather, and the varying density of different plates affects its action. Again, the quality of acid supplied by different chemists will be found to vary. After a bath has been used, the acid is of course weakened by the presence of the copper it holds in solution, and as few etchers use a fresh bath for every plate they do, it has to be strengthened by the addition of a small quantity of pure acid. This quantity has to be guessed at, so that the strength of the bath can never afterward be accurately computed. Another fact which upsets rigid time calculations is that isolated lines are bitten much more slowly than those which are closer together. The reason is said to be that the temperature rises with the action of the acid, and that the heightened temperature thus produced where the lines are numerous intensifies the action of the acid on that part of the plate. Where biting-in is thus proceeding at



"AT CHURCH." BY ROBERT BEYSCHLAG.
FROM THE PAINTING IN THE MUNICH EXHIBITION.

To prepare the liquid ground recommended by Hamerton, the ordinary ball of etching ground is broken into small pieces and put into a pint bottle of ether. The bottle must be well shaken three or four times a day during three days, and then allowed to remain for three weeks. The solution will now have divided itself into two distinct parts, a thin transparent part above, dark in color, and a muddy part below. The thin portion is to be poured off into another bottle, carefully leaving the muddy deposit behind. It should be again allowed to stand for three weeks and again decanted. The result is a solution fluid as water and entirely free from impurities. A somewhat similar solution is made by breaking up the ordinary etching ground in chloroform. In order to purify this preparation it is necessary to strain it several times through the finest muslin. Transparent etching ground consists of white wax, five parts, and gum mastic, three parts.

For the bath, nitrous acid is recommended in preference to nitric acid, being more regular in its action. The fumes of the former, however, are more disagreeable, and care must be taken to inhale them as little as possible. When nitric acid is used it is commonly of the specific gravity of 1.420, an equal quantity of water being added to make the bath. Nitrous acid of the specific gravity of 1.360 is generally used. Nitrous acid is one tenth less powerful than nitric, so that to make a bath of nitrous acid equal

in strength to this nitric bath, ten parts of acid must be used to nine parts of water. Seymour Haden's



"A HEROINE OF ROMANCE." BY C. VON BODENHAUSEN.

FROM THE PAINTING IN THE MUNICH EXHIBITION.



"NEMESIS." BY C. KRONBERGER.

FROM THE PAINTING IN THE MUNICH EXHIBITION.

glass rod; the whole is then poured into warm water, and kneaded into balls. Care must be taken to pre-

be used to nine parts of water. Seymour Haden's

a rapid rate, the amount of gas bubbles that keep forming enables the etcher to gauge the action of the

acid. The plan Mr. Robertson here recommends has the advantage that he who uses it increases his mastery of the method every fresh plate he does, while he who trusts to time tests is, after years of experience, liable to serious disappointment, owing, perhaps, to a chemist's mistake.

Before biting-in a plate of any importance, however, it is not a bad plan for a beginner to test his acid bath on a very small plate with a few lines scribbled on it, noting the effect, say, of five, ten, and fifteen minutes' immersion. This will be found of some use if regarded as an approximation to what will happen with another plate, but must not be looked upon as a substitute for watchfulness during the process. Owing to the timidity of inexperience there is usually more danger of the beginner not biting-in his plate enough than of his overdoing it; let him take courage, however, when he learns that it is generally much easier to rectify a plate that has been overbitten than one underbitten.

The sort of line work which is to be done with the needle must bear reference to the kind of biting-in that the plate is to be subjected to. A small subject is sometimes etched in such a way as to produce almost an exact reproduction of a pen-and-ink drawing. In this case the biting-in is of the simplest character, with little or no gradation in the depth of the lines, the darks being for the most part produced by the lines being laid closer together. Mr. Robertson mentions Pierre Billet's plate, "Washerwomen," in Hamerton's third edition of "Etching and Etchers," as apparently done in this fashion. This is a simple method and is easy for a beginner, but has to be departed from when any attempt is made to realize what is distinctive in etching, and to produce the utmost possible effect. In fact, in its general management of the lines, the most finished technical process, that of M. Lalanne, reverses the simple method just mentioned. The darkest lines ought to be kept well apart from each other, those which are to be of medium strength ought to be nearer, and very light lines ought to be quite close to each other. This principle is thus expressed by Hamerton: The breadth of the white spaces between the lines ought to be in proportion to the depth of the biting. The chief reason for this apparently inconsistent proceeding is that the lines widen under prolonged action of the acid, and so, if laid very close, they are apt to run

together and make an opaque blot. Another reason for this rule is that in skilful printing of dark shadows some of the ink is brought out of the deep lines and made to tone the white spaces left between them. The result thus attained unites the two most desirable qualities in dark shadow, depth and transparency.

All such rules as this must, we are reminded, however, be applied with judgment, and never taken absolutely. For instance, we may find that in the extreme distance of a landscape, the lines can hardly be made too fine, or put too close together, and yet the sky which is to be still lighter must have its fine lines left more open.

Should the etcher wish to take out any lines that he

formed at some risk of foul biting. There are two methods of preparing the plate for the process—with the dabber and with the roller. The plate must be most thoroughly cleaned, first with spirits of turpentine and afterward with bread, chloroform, or a solution of pearlsh. If the last is used the plate must be well rinsed afterward with pure water. Whiting is then to be rubbed into the lines and the surface wiped clean with chamois leather. This being done, heat a spare piece of copper and melt some etching ground on it, then with a silk dabber take up a small quantity of the ground and dab it very lightly all over the plate which is to be rebitten. This plate must also have been previously heated when the dabber is to be used.

When the roller is employed instead of the dabber an extra piece of copper is used as before, but neither of the plates is to be heated. A little of the liquid etching ground (of the consistency of cream) is put on to the roller with a palette knife. The roller is then passed backward and forward over the extra plate till it is evenly and thinly charged with the ground, when it is transferred to the etched plate, over which it is lightly passed many times in all directions. The plate must now be heated slightly, and when cool will be ready for biting-in and stopping-out again as before. The etcher cannot be too careful to keep his plates and roller free from dust. Should any spots of dust appear in the ground they must be painted over with stopping-out varnish. If the liquid etching ground is too thick to work easily, a few drops of oil of lavender must be added. The use of the roller is generally preferred to that of the dabber, but does not answer when the plate is un-



REDUCED FAC-SIMILE OF A PENCIL PORTRAIT SKETCH BY W. KURTZ.

has drawn, they must be painted over with the stopping-out varnish. When the varnish is dry and not yet hard, other lines can be drawn through it, but it is not so easy to work upon as the original ground. Should, therefore, any very serious alteration be contemplated, it will be best to stop-out that part of the plate entirely and add new work afterward in a later state of the plate.

The purpose of rebiting is to deepen such lines as are found, on the plate being proved, to be insufficiently bitten. The great advantage of this process is that it tends to finish the plate without the addition of more lines, and so helps to keep the quality of freshness which the addition of more work is likely to impair. It is a very delicate operation and is per-

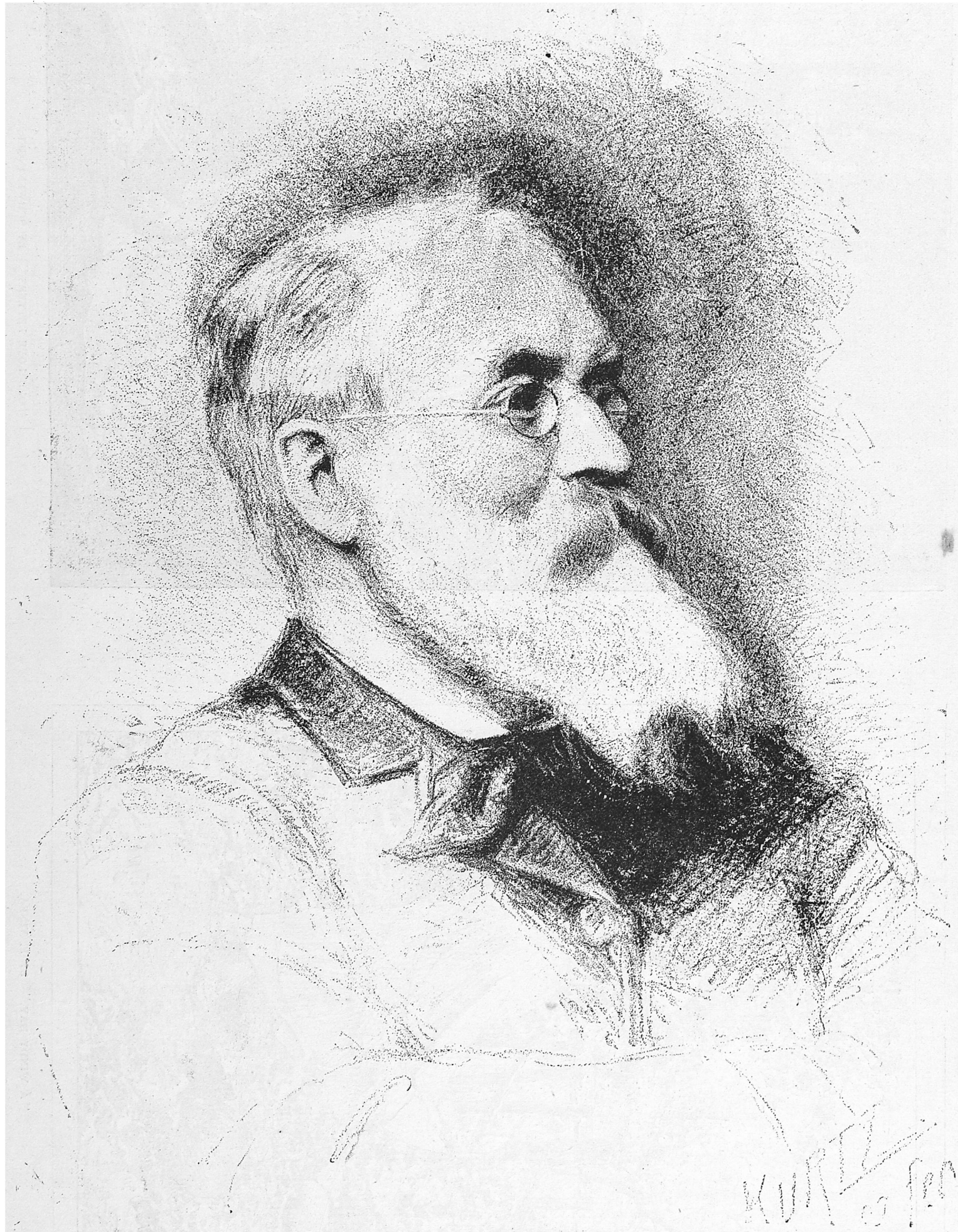
even in places, as is often the case. The roller is usually four or five inches long. Mr. Robertson had an extra-sized one made for him in Paris about a foot long, but found it nearly useless, for the reason given above. In Paris there are skilful workmen who constantly prepare artists' plates for rebiting. Some etchers like the use of the roller so much as to prepare their plates with it not only for rebiting but for laying the ground in the first instance. If lines are very shallow indeed it is impossible to prevent their getting filled up with the etching ground, and it will then be found necessary to have recourse to re-etching.

Re-etching is the adding of a fresh set of lines after the plate has been bitten in and the first etching ground cleaned off. A fresh ground has to be laid,

and for this purpose transparent etching ground is generally used, which is applied with the dabber in the ordinary manner. Rather more ground must be applied than in the first instance, and it must be well worked into the old lines. Any parts of the plate that do not require fresh work should be farther protected with a coat of Brunswick black. Mr. Robertson says

lines but to leave their edges very thinly covered, so thinly in fact that when the plate is put into the bath, the acid often finds its way through at these places, with the effect of widening the lines. Of course this may on occasion be an advantage, but it is not very often, in the more deeply bitten parts of an etching, that fresh lines are found to be requisite.

burnisher will generally be found sufficient to remove the scratches. When a large part of the plate is slightly over-bitten, as often happens with a sky, it may be rendered paler by being rubbed with a thick stick of charcoal and olive oil. If water be substituted for olive oil, the charcoal will act more powerfully. A stronger means still is a piece of Ayr stone used in



REDUCED FAC-SIMILE OF A RED CRAYON PORTRAIT BY W. KURTZ.

that he has often found that the liquid chloroform ground answers the purpose better than transparent etching ground, as when not smoked it is quite transparent enough for one to see what lines are already on the plate, and its color being brown, the new lines are more easily seen. Where the lines are already deeply bitten, liquid etching ground is apt to fill the

When isolated passages are to be reduced in strength, the scraper and the burnisher are used, care being taken that the scraper is kept constantly sharpened and the burnisher brilliantly polished. If, while printing from the plate, or in polishing it with crocus powder, etc., it should get scratched through the accidental presence of small particles of grit, the

the same manner as the charcoal. This is a kind of stone from which hones are sometimes made.

We defer until our next issue such further extracts from Mr. Robertson's treatise as tell about the best method of effacing faulty passages, about soft ground etching, etching in the bath after Mr. Seymour Haden's method, printing, and labor-saving devices.